



## SEQUENCE LISTING

<110> Lee et al., John C  
<120> COMPOSITIONS AND THERAPEUTIC METHODS USING MORPHOGENIC PROTEINS  
AND STIMULATORY FACTORS  
<130> STK-1 DIV-3  
<140> US 09/287,500  
<141> 1999-04-07  
<150> US 09/158,220  
<151> 1998-09-22  
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<170> PatentIn version 3.2  
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<212> PRT  
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Leu Asp Asn Glu Val His Ser Ser Phe Ile His Arg Arg Leu Arg Ser  
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Gln Glu Arg Arg Glu Met Gln Arg Glu Ile Leu Ser Ile Leu Gly Leu  
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Pro His Arg Pro Arg Pro His Leu Gln Gly Lys His Asn Ser Ala Pro  
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Met Phe Met Leu Asp Leu Tyr Asn Ala Met Ala Val Glu Glu Gly Gly  
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Gly Pro Gly Gly Gln Gly Phe Ser Tyr Pro Tyr Lys Ala Val Phe Ser  
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Thr Gln Gly Pro Pro Leu Ala Ser Leu Gln Asp Ser His Phe Leu Thr  
115 120 125  
Asp Ala Asp Met Val Met Ser Phe Val Asn Leu Val Glu His Asp Lys  
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Glu Phe Phe His Pro Arg Tyr His His Arg Glu Phe Arg Phe Asp Leu  
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Ser Lys Ile Pro Glu Gly Glu Ala Val Thr Ala Ala Glu Phe Arg Ile  
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Tyr Lys Asp Tyr Ile Arg Glu Arg Phe Asp Asn Glu Thr Phe Arg Ile  
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Ser Val Tyr Gln Val Leu Gln Glu His Leu Gly Arg Glu Ser Asp Leu  
195 200 205

Phe Leu Leu Asp Ser Arg Thr Leu Trp Ala Ser Glu Glu Gly Trp Leu  
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Val Phe Asp Ile Thr Ala Thr Ser Asn His Trp Val Val Asn Pro Arg  
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His Asn Leu Gly Leu Gln Leu Ser Val Glu Thr Leu Asp Gly Gln Ser  
245 250 255

Ile Asn Pro Lys Leu Ala Gly Leu Ile Gly Arg His Gly Pro Gln Asn  
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Lys Gln Pro Phe Met Val Ala Phe Phe Lys Ala Thr Glu Val His Phe  
275 280 285

Arg Ser Ile Arg Ser Thr Gly Ser Lys Gln Arg Ser Gln Asn Arg Ser  
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Lys Thr Pro Lys Asn Gln Glu Ala Leu Arg Met Ala Asn Val Ala Glu  
305 310 315 320

Asn Ser Ser Ser Asp Gln Arg Gln Ala Cys Lys Lys His Glu Leu Tyr  
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Val Ser Phe Arg Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala Pro Glu  
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Gly Tyr Ala Ala Tyr Tyr Cys Glu Gly Glu Cys Ala Phe Pro Leu Asn  
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Ser Tyr Met Asn Ala Thr Asn His Ala Ile Val Gln Thr Leu Val His  
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Phe Ile Asn Pro Glu Thr Val Pro Lys Pro Cys Cys Ala Pro Thr Gln  
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Leu Asn Ala Ile Ser Val Leu Tyr Phe Asp Asp Ser Ser Asn Val Ile  
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Pro Pro Gly Tyr Gln Ala Phe Tyr Cys His Gly Glu Cys Pro Phe Pro  
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Leu Ala Asp His Phe Asn Ser Thr Asn His Ala Val Val Gln Thr Leu  
 35 40 45

Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Val Pro Thr  
 50 55 60

Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu Asn Glu Lys Val  
 65 70 75 80

Val Leu Lys Tyr Asn Gln Glu Met Val Val Glu Gly Cys Gly Cys Arg  
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 20 25 30

Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Val Val Gln Thr Leu  
 35 40 45

Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Val Pro Thr  
 50 55 60

Glu	Leu	Ser	Ala	Ile	Ser	Met	Leu	Tyr	Leu	Asp	Glu	Asn	Glu	Lys	Val
65					70					75					80

Val	Leu	Lys	Tyr	Asn	Gln	Glu	Met	Val	Val	Glu	Gly	Cys	Gly	Cys	Arg
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 20 25 30

Xaa Cys Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn His Ala  
 35 40 45

Xaa Xaa Gln Xaa Xaa Val Xaa Xaa Xaa Asn Xaa Xaa Xaa Xaa Pro Xaa  
 50 55 60

Xaa Cys Cys Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa  
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Xaa Trp Xaa Xaa Xaa Pro Xaa Gly Xaa Xaa Ala Xaa Tyr Cys Xaa Gly  
20 25 30

Xaa Cys Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn His Ala  
35 40 45

71  
Xaa Xaa Gln Xaa Xaa Val Xaa Xaa Xaa Asn Xaa Xaa Xaa Xaa Pro Xaa  
50 55 60

Xaa Cys Cys Val Pro Thr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Xaa  
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Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Lys Xaa Xaa Xaa Xaa Xaa Val Xaa  
85 90 95

Xaa Xaa Xaa Gly Cys Xaa  
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